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For information

Beach Water Quality of Hong Kong in 2006

Introduction

The purpose of this paper is to brief Members on the water quality of gazetted beaches in Hong Kong in 2006.

Background

2. The Environmental Protection Department implements a monitoring programme to assess the water quality of 41 gazetted beaches in Hong Kong.

3. The beach water quality is assessed through a ranking system which links the water quality of a beach with swimming-associated health risks, as indicated by the number of *E. coli* bacteria in the water. According to this system, beaches are ranked as “Good”, “Fair”, “Poor” or “Very Poor” in accordance with the *E. coli* level. Beaches with annual geometric mean *E. coli* levels below 25 per 100 mL are ranked as “Good”, between 25 and 180 per 100 mL as “Fair”, and those between 181 and 610 per 100 mL as “Poor”. Only those beaches in the ranks of “Good” and “Fair” meet the Water Quality Objective (WQO) for bathing water. Beaches ranked “Very Poor” (*E. coli* level exceeding 610 per 100 mL, which corresponds to a swimming-associated illness rate of more than 15 cases per 1,000 swimmers) are generally considered not suitable for swimming, and are recommended to be closed to safeguard the health of swimmers.

Beach Water Quality in 2006

4. In 2006, among the 41 gazetted beaches, 22 (or 54%) were ranked as “Good”, 12 (29%) as “Fair”, five (12%) as “Poor” and two (5%) as “Very Poor” (**Figure 1**). The total number of beaches complying with the WQO was maintained at 34 or 83%, the same as in the previous three years (2003 - 2005). This represented a substantial improvement from the 63% compliance recorded in 1997 (**Figure 2**). The seven beaches with “Poor” or “Very Poor” rankings, which did not comply with the WQO, were all located along the Tsuen Wan coast. They continued to be closed to swimmers in 2006 due to poor water quality.

5. In 2006, there were some changes in the annual rankings of five beaches as compared with those in 2005. Among them, Cheung Chau Tung Wan Beach changed

marginally from “Good” to “Fair”, while Approach, Casam, Hoi Mei Wan and Lido Beaches in Tsuen Wan changed from “Very Poor” to “Poor”. The changes were generally within the normal range of water quality fluctuation of the beaches.

Closed beaches in Tsuen Wan

6. The water quality of seven beaches in Tsuen Wan, namely Anglers’, Approach, Casam, Gemini, Hoi Mei Wan, Lido and Ting Kau Beaches continued to be unsatisfactory. Apart from the potential pollution sources in the unsewered hinterlands, the poor water quality was also related to the high bacterial levels in the marine water off the Tsuen Wan coast.

7. The implementation of the Harbour Area Treatment Scheme (HATS) Stage 1 at the end of 2001 improved water quality at beaches on the eastern side of Hong Kong Island, but at the same time it resulted in elevated bacterial levels at beaches in the Tsuen Wan area. To improve the condition of the Tsuen Wan beaches, the Government is working on the next stage of the Harbour Area Treatment Scheme (HATS Stage 2A), and plans to disinfect effluent from the Stonecutters Island Sewage Treatment Works (STW) by end 2009, subject to the support of the community for full recovery of the operating cost through sewage charges. The disinfection of effluent at the Stonecutters Island STW, together with the provision of public sewers in the area should substantially improve the water quality of the Tsuen Wan beaches and pave the way for their re-opening to the public for swimming.

8. In view of the poor water quality of the seven Tsuen Wan beaches, they are recommended to remain closed for swimming in the 2007 bathing season.

Conclusion

9. Thirty-four (83%) of the 41 gazetted beaches complied with the WQO in 2006, the same as in the previous three years.

10. Seven Tsuen Wan beaches (*viz.* Anglers’, Approach, Casam, Gemini, Hoi Mei Wan, Lido and Ting Kau Beaches) did not meet the WQO in 2006 and were closed for swimming. To ensure an early re-opening of the beaches, the Government is working on the next stage of the Harbour Area Treatment Scheme (HATS Stage 2A), and plans to disinfect effluent at the Stonecutters Island Sewage Treatment Works by end 2009, subject to the support of the community for full recovery of the operating cost through sewage charges. In view of their poor water quality, the seven Tsuen Wan beaches are recommended to remain closed for swimming in the 2007 bathing season.

Environmental Protection Department
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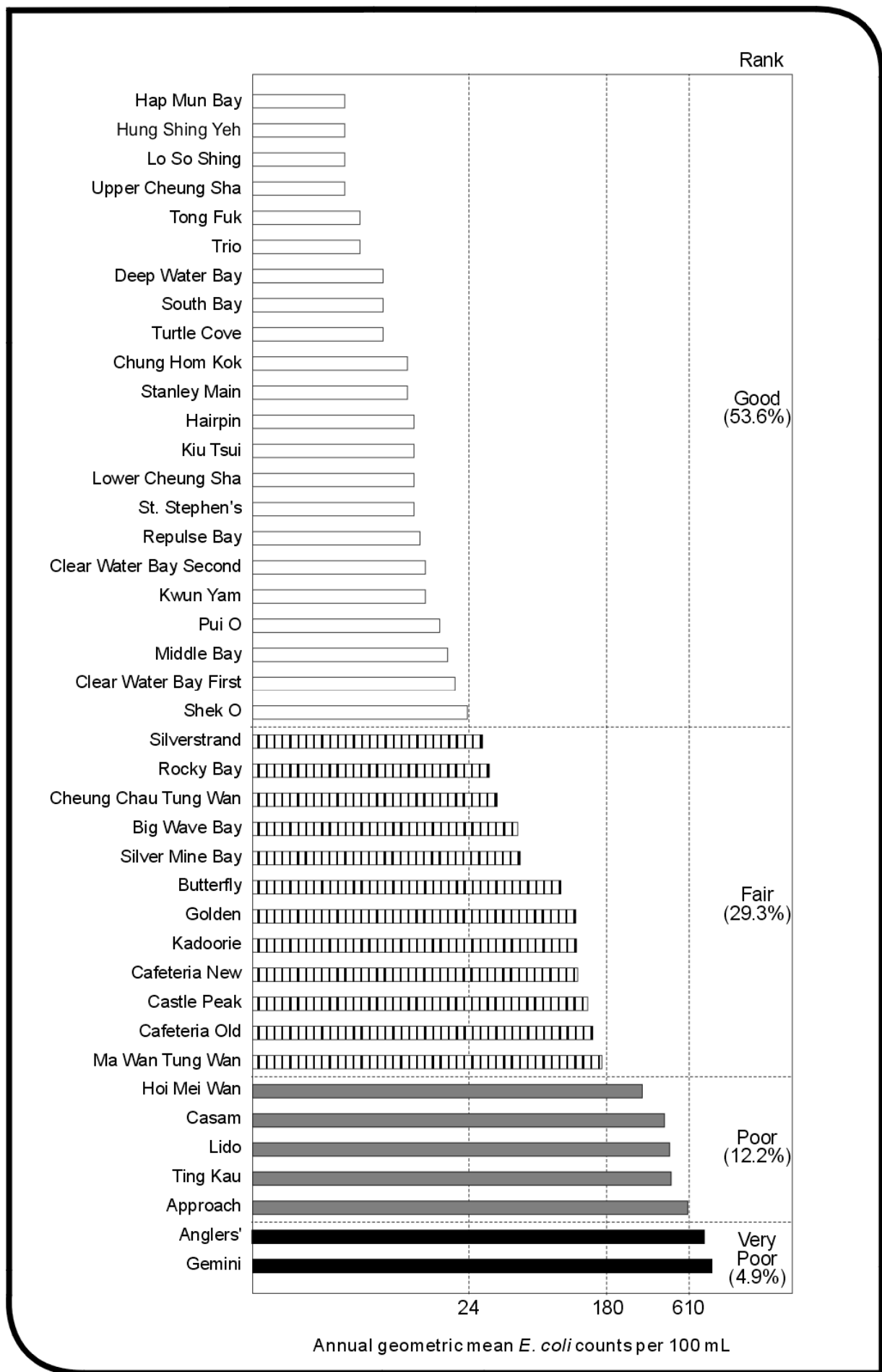


Figure 1 Annual beach rankings in 2006

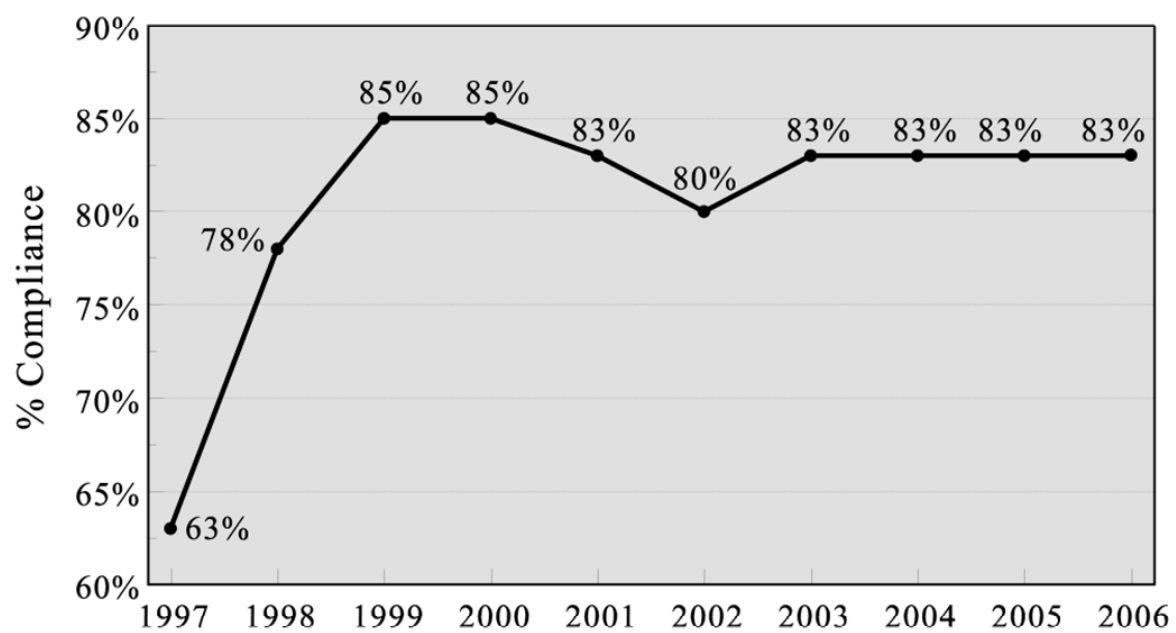


Figure 2 Level of compliance with the Water Quality Objective at the 41 gazetted beaches in Hong Kong, 1997 – 2006